

REMARKS

Claims 1-19 are pending in the current application. Claims 1, 3-4, 12, 14, 18, and 19 have been amended herein. Claims 2, 13, and 17 have been cancelled herein. In addition, claims 5, 10 and 15 have been cancelled herein, since they cover the non-elected invention. The Examiner has required that the Applicants make an Election/Restriction. Applicants elect Species 1 without traverse. All of the current pending claims are readable on Species 1. Applicants reserve the right to file a divisional application claiming the non-elected invention of claims 5, 10 and 15 and illustrated in Figs. 6-9.

Claims 1-4 and 9 have been rejected under 35 U.S.C. 102(b) as being anticipated by Butcher et al. (US 6,004,300). The Examiner states that Butcher teaches a syringe with a barrel (62), a plunger 61 and a stopper with anti-reflux means comprising a more flexible base (1) and a more rigid distal stopper (14).

Butcher discloses a plunger piston 2 including a two-material bi-layer. (Col. 5, lns. 60-61). The piston 2 comprises a rigid material (such as polystyrene, high density polyethylene or polypropylene) forming a piston infrastructure, or inner sheath 4. (Col. 5, lns. 62-67). The piston 2 further includes an outer sheath 10, which engages the inner wall of the syringe barrel 62 to create a fluid-tight seal. (Col. 6, lns. 23-26). The outer sheath 10 partially enshrouds the inner sheath 4 and is made of an elastomeric material. (Col. 6, lns. 28-30). Thus, the plunger piston of Butcher has a “bi-layer construction with a more rigid inner sheath and a comparatively flexible elastic outer sheath.” (Col. 2, lns. 60-61). This two-piece piston 2, is then retained upon the plunger shaft 61. (Col. 6, lns. 20-21 and Fig. 9).

The current invention, as recited in amended independent claim 1, requires a flexible base that is part of and extends from the distal end of the plunger rod. The rigid stopper is supported by the flexible base. Upon contact with the distal wall of the barrel, the flexible base of the plunger rod will absorb the compressive forces generated by this contact, since it is more flexible. Thus, since the stopper does not substantially compress, there is little or no reflux.

Butcher fails to disclose a plunger rod having a flexible base extending from the distal end of the plunger rod. Rather, Butcher discloses a bi-layer piston (or stopper) that includes a flexible outer sheath to ensure a fluid tight seal and a rigid inner sheath. Butcher does not disclose any kind of flexible base projecting from the plunger. In addition, there is no translation of the compressive forces from the rigid inner sheath to the flexible outer sheath in the axial direction. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” M.P.E.P. §2129 (quoting *Verdegall Bros. v. Union Oil CO. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053( Fed. Cir. 1987). Since Butcher fails to disclose every element of claim 1, as amended, it is respectfully submitted that the 35 U.S.C. 102(b) rejection should be withdrawn with respect to the claim 1. In addition, it is respectfully submitted that the 35 U.S.C. 102(b) rejection should be withdrawn with respect to claims 3-4 and 9 since these claims depend from claim 1.

Claims 6-8,11-14 and 16-19 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Butcher in view of Tu (US 4,865,863) and Dovey (US 3,889,673). Claims 6-8 and 11 depend from claim 1, which is believed to be allowable, at least for the reasons set forth above and it is requested that the 35 U.S.C. 103(a) rejection be withdrawn. In addition, independent claims 12, 18 and 19 have been amended to incorporate the same features as claim 1. Thus, each of these independent claims requires a flexible base extending from the distal end of the plunger. As discussed above, Butcher fails to disclose this feature. For at least this reason, it is respectfully submitted that claims 12, 18 and 19 are allowable. Since claims 14 and 16 depend from claim 12, it is further believed that these claims are also allowable as well.

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone applicant's attorney at (201) 847-6797 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 02-1666 therefor.

Dated: October 9, 2007

Respectfully submitted,

By: /Jeanne P. Lukasavage Reg No 45172/

BECTON, DICKINSON AND COMPANY  
1 Becton Drive  
Franklin Lakes, New Jersey 07417  
201-847-6797

Jeanne P. Lukasavage  
Registration No.: 45,172

Doc.#130698